

MAGICARD TURBO Color Printer

Quick Start Guide for the
TURBO, TURBO M AND TURBO MS



Quick Start Guide *Printer/Software Setup*

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Setting up your MAGICARD TURBO Color Printer takes just three easy steps:

1. Unpack and install the printer

- A Preparing a Location for the Printer
- B Removing the Printer from the Box
- C Checking the Package Contents
- D Install the Dye Film
- E Load the Plastic Cards
- F Cleaning the Card Cleaning Roller (sticky or tacky roller)
- G Connect the Printer to a Power Supply
- H Test the Printer Operation
- I Install the Parallel Interface Cable and Ultra Secure Key

2. Load the supplied WINDOWS Driver software.

- Jx Install the WINDOWS Driver (WINDOWS 3.x)
- Jy Install the WINDOWS Driver (WINDOWS 95)
- K Printer Setup
- L Install the WINDOWS Driver (WINDOWS NT4)

3. Verify computer-to-printer operation.

- M Verifying Computer to Printer Communication in WINDOWS
- N In Case of Difficulty.
- P Important Cleaning procedures.
- Q LED Error Codes

Note: The Ultra WEB site at <http://www.ultra.co.uk> contains comprehensive technical support information including the latest downloadable software, WINDOWS Drivers, Technical Bulletins etc

Conventions

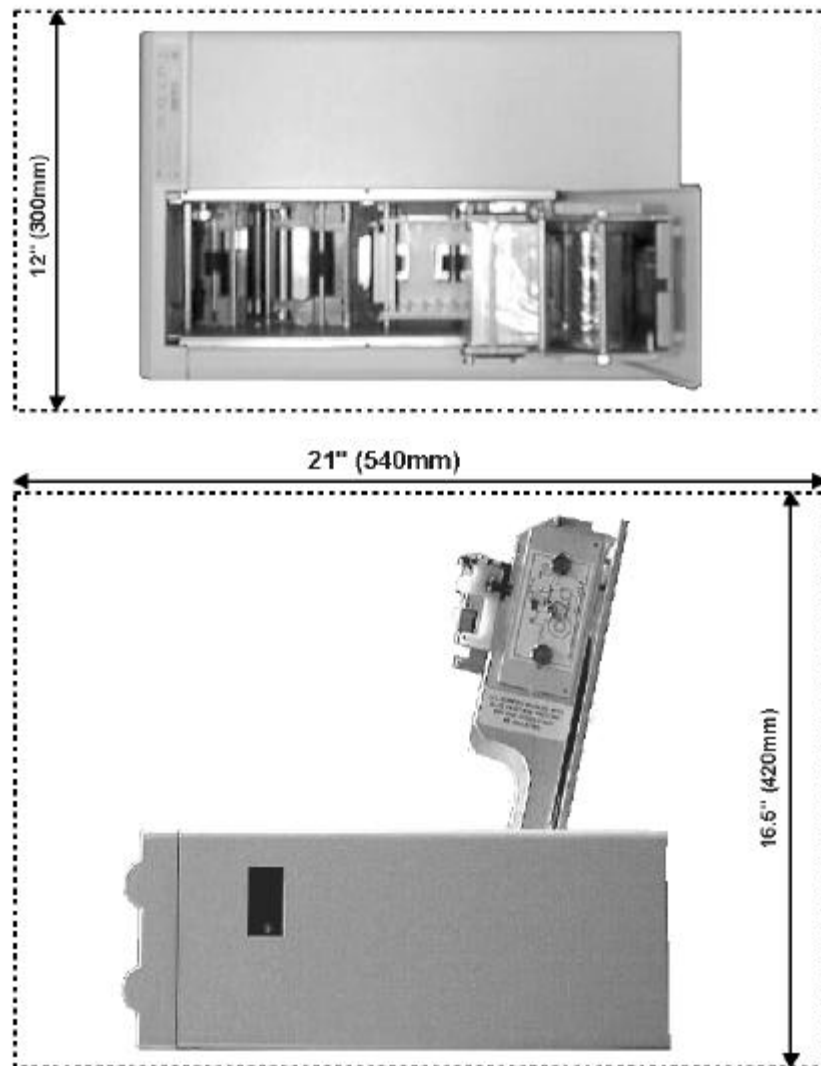
Throughout this guide, the following conventions are used to identify important information.

WARNING - *Warning messages indicate where personal injury could result from not following the correct procedures.*

CAUTION - *Caution messages indicate where damage to equipment could result from not following the correct procedures.*

NOTE - *Notes convey important information that is identified within the text.*

Preparing a Location for the Printer



Location Requirements for your printer:

- A clean, level surface.
- Adequate space for:
 - opening the Top Cover
 - cable access at the rear.
 - allowance for air circulation.
- An adequately ventilated room.
- An adequate power supply.
- Ambient temperature +10 to +30 deg C.
- Relative Humidity 20/70% RH.
- Protection from direct sunlight and chemicals.
- Protection from abrupt temperature

B Removing the Printer from the Box

1 Unpack the printer and accessories.



Carefully open the box and remove any accessories.



Place on a smooth, level table and remove the polyethylene container.

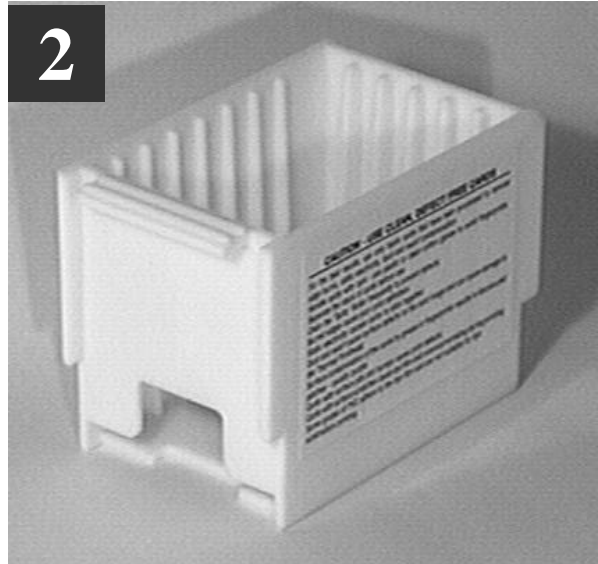
Checking the Package Contents



Locate each item as listed below:



1
The MagiCard Color Printer



2
The Card Cassette



3
Take-up Core



4
A Power Cord with Moulded Plug for your Country



Envelope containing this Quick Start Guide and the PrintMAGIC WINDOWS Driver 3.5" floppy disk.



OPTIONAL STARTER KIT

Note: This Starter Kit is not supplied with your printer and must be ordered separately, Part No M9004-698.

The Starter Kit contains:

- One roll of UR1 YMCKO Dye Film for full colour printing
- 200 PVC Cards
- 25 Cleaning Cards and Cleaning Pen for Thermal Printhead
- 1 Pair of Gloves
- 1 Centronics IEEE 1284 Parallel Cable, M2900-337

IMPORTANT NOTE:
Reference Centronics Parallel Connection Cable:

It is recommended that an IEEE 1284 specification cable be used to connect the Turbo Printer to the parallel port of the PC.

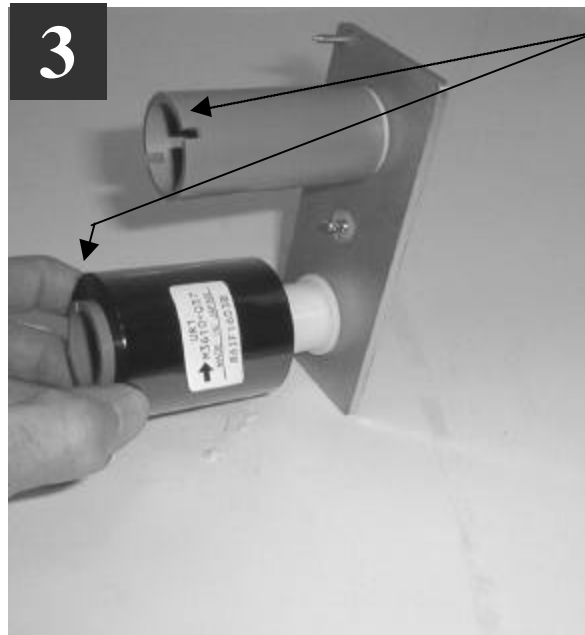
This cable has double screening with the data wires being in twisted pairs to eliminate crosstalk and noise pickup found in the standard types of unscreened parallel printer cable.

Failure to use this specification cable may lead to image degradation and corruption of the image data being downloaded to the printer resulting in a poor quality or scrambled multi-coloured card being printed.

Install the Dye Film

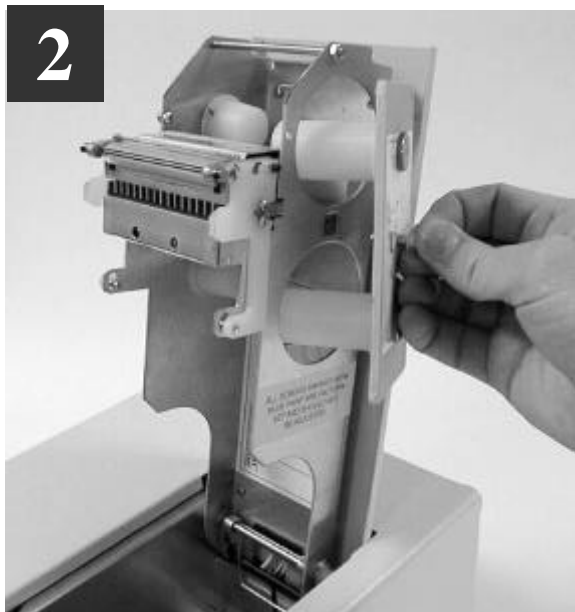


1 Open the Printer Top Cover by releasing the catch on the right-hand side of the printer.



Recesses

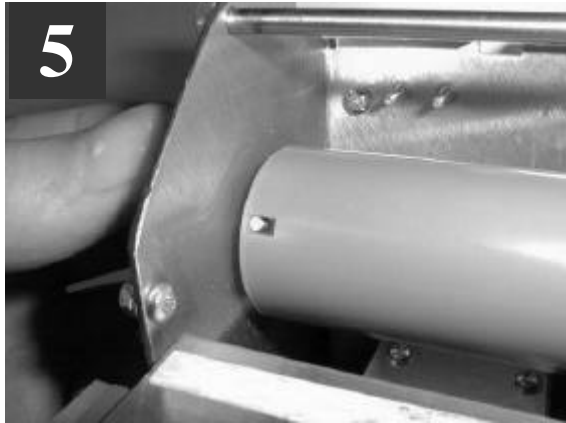
3 Replace the Film Carrier



2 By turning the "Dzus" fastener ring a quarter turn counter-clockwise, the dye film carrier can be removed.



4 Open the Dye Film package. Fit the dye film on the lower boss, observing the correct orientation of the dye film. Fit the empty take-up core on the upper boss, observing the correct orientation of the notches on the Take-up Core.



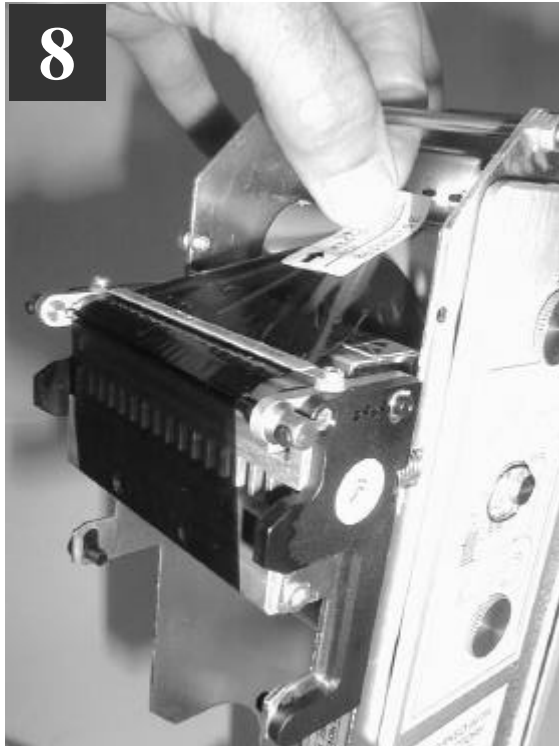
5
Manually turn the Spur Gear until the slots on the core engage with the lugs.



6
Turn the 'Dzus' Fastener 1/4 turn clockwise to lock in place. Lay the ring flat against the panel

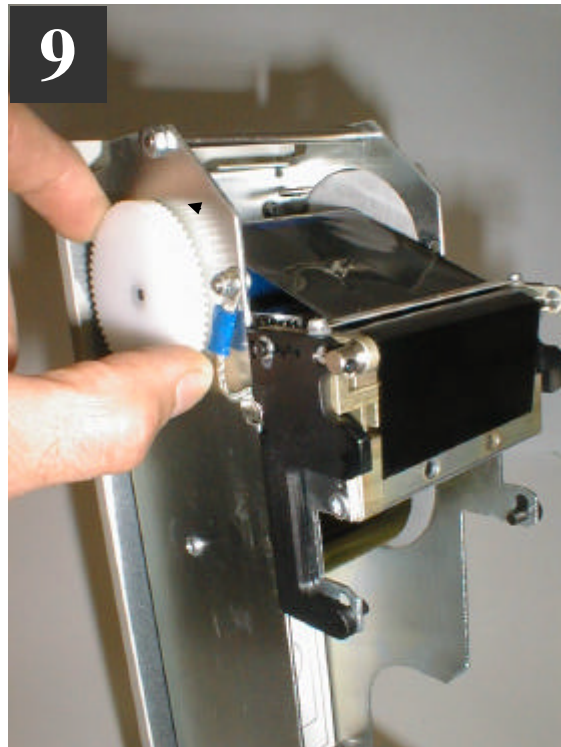


7
Pull about 6" of dye film off the roll of dye film, observing that it should be coming off the top of the roll, as per the label illustrations.



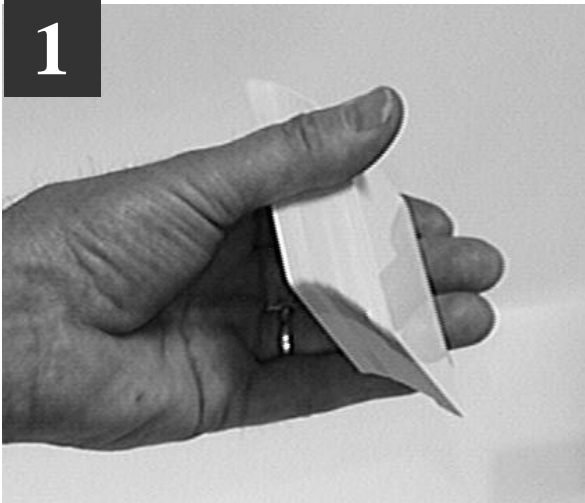
Avoid touching the tip of the thermal printhead with your hands.

Feed the leading edge of the dye film over the tip of the Thermal Printhead and beneath the two guide bars, where fitted. (Refer to the diagram on the side).

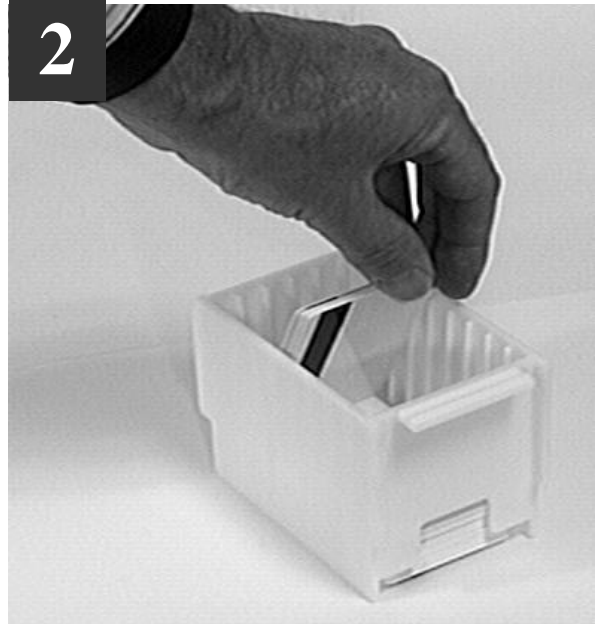


Fasten the end of the dye film onto the Take-up Core with a small piece of adhesive tape, and wind on a couple of turns. Avoid creasing of the dye film and position it centrally on the core.

E Load the Plastic Cards



Flex a stack of plastic cards, to make sure they are not 'stuck' together. Avoid touching the surfaces to be printed.

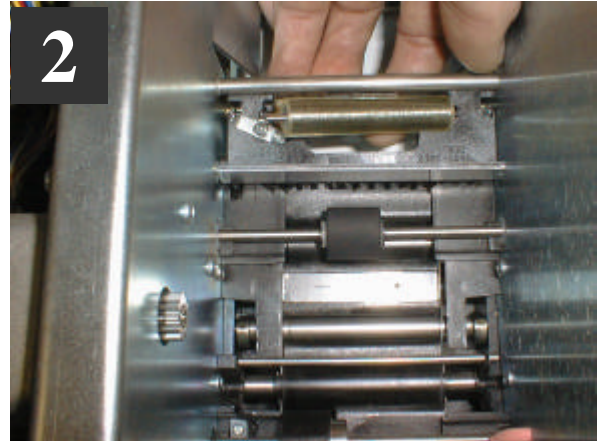
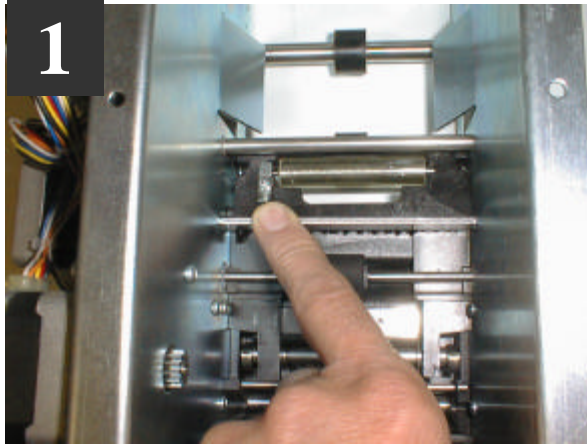


Drop the cards flat down into the plastic Cassette, side to be printed uppermost, mag stripe to the left and facing down (if used).



Refit the card hopper back into the printer.

Cleaning the Card Cleaning Roller (sticky or tacky roller)

F

The 'tacky' roller should be removed for cleaning before each batch of 100 cards. To remove the 'tacky' roller, release the locking tab on the left-hand side and, by putting your fingers beneath it, the roller can then be removed. Remove surface dust by using a strip of 'Scotch' adhesive tape, and 'snap' back into place.



Install the Cassette into the Printer.



Close the Printer Cover and secure the front latch.

G Connect the Printer to a Power Supply



1 Locate the Mains Switch on the rear panel.



3 Switch ON. The indicators should all flash and the motors run briefly. Finally, the READY LED will remain ON.



2 Plug in the Power Cord. Plug the other end into a Power Supply socket.

Test the Printer Operation



Print an Internally-Generated Test Card to make sure your printer is working correctly:



1 At the rear of the printer, locate the TEST Push-button. This is located in the rear panel, just above the Centronics parallel interface connector. Press the push-button momentarily.



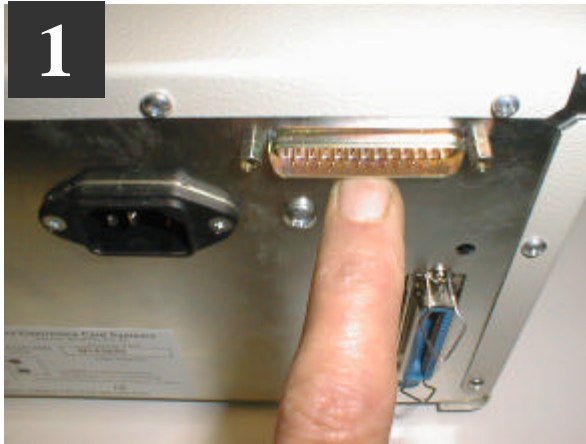
2 It will take a few seconds before printing commences. When finished, a Test Card will be ejected from the aperture in the Front Panel.



3 The card should be as shown, with Yellow-Magenta-Cyan-Black panels, a Cyan background and Yellow-Magenta-Cyan graduated scales. This card can only be printed by a printer in isolation, when using UR1 Dye Film. Note also that the internal software version is printed on the test card.

I

Install the parallel Interface Cable and Ultra Secure Key



1 Switch the printer OFF. Locate the UltraSecure Interface connector on the rear panel.



3 Plug a good quality, screened Centronics Interface cable into this socket and secure the wire latches. Plug the other end into the Printer connector of your PC (LPT1 or LPT2)



2 Note the position for the UltraSecure Key at the rear of the Magicard Printer.

Please note that the UltraSecure logo is now a standard feature programmed into the firmware of all TURBO models. It can be switched on/off from within the OVERCOAT section of the PrintMagic driver. If you wish to have a CUSTOM LOGO produced you must ask your dealer for a custom key order form. Your logo will then be programmed into a key of the type shown above. When the key is plugged into your Turbo it will override the internal programme and **your logo** will be printed instead of the standard UltraSecure logo.

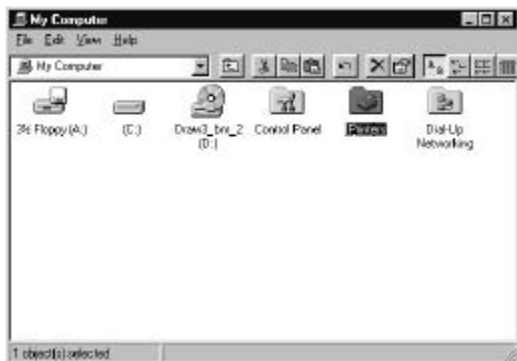


4 Connection of the parallel cable to the rear 25-way connector on the PC.

Install the J WINDOWS Driver

Procedure to be followed if your PC uses WINDOWS 95:

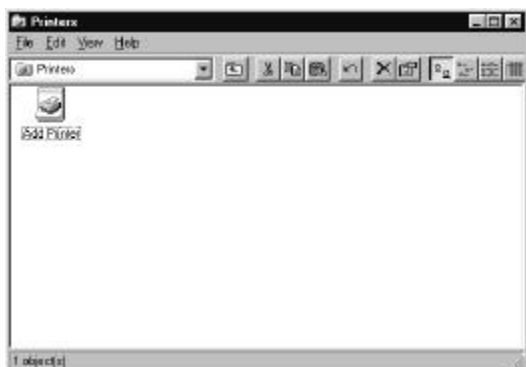
- Start the PC and from the desktop select the **My Computer** folder. Select and open the **Printers** folder:



- Select the **Have Disk** button:



- Select and open the **Add Printer** icon.



- Insert the PrintMagic WINDOWS Driver Disk into the PC Drive A.



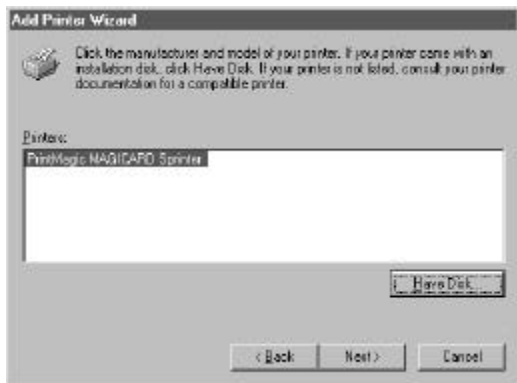
- Select the **Next>** button:



- Select the **OK** button:



- Select the **Next>** button:



- If you opt to print a test page, do so only if the printer is connected, switched ON, loaded with cards and dye film and ready to run. The test page may be incomplete. Select the **Finish** button to complete the installation.



- Select the desired port (usually **LPT1**) and select the **Next>** button:



You may then be offered the choice of which printer to use as the default printer. Select the **PrintMagic MAGICARD Printer** and then select the **Next>** button:





Printer Setup

Printer Setup procedure to be followed if the default settings differ from your requirement:

Printer Setup

Changes to the printer setup options performed via the Control Panel are non-volatile, until subsequently changed, even though the PC may be switched off after use. Most software applications provide the means to change the printer setup but be warned - these settings may prove to be volatile with some applications and your settings may be lost. Play safe and use the Control Panel.

If you need to alter the default settings, the PrintMagic™ printer driver provides you with easy-to-use tab dialog boxes.

Along the bottom of the setup dialog boxes is a row of four Pushbuttons, **OK**, **Cancel**, **Defaults** and **Help**.

Initialise the Setup

Initialise the setup by pressing the **Default** pushbutton.

For WINDOWS 3.x

- Start WINDOWS and in the **MAIN** group, select and open the **CONTROL PANEL** window.
- Select and open the **PRINTERS** icon.
- The **PRINTERS** dialog box appears.
- Highlight the **PrintMagic MAGICARD Printer Driver** and from the Options menu, select **PRINTER SETUP**.
- The **PrintMagic Printer Setup** window appears, which has six pages, any of which may be viewed by clicking on the appropriate tab.

For WINDOWS 95

- Go to the "My Computer" folder.
- Double Click on the Printers folder.
- Double Click the PrintMagic MAGICARD Printer icon.
- Select "Printer" from the menu and go to Properties.
- Select the Details tab.
- Select the Setup button.

Setup Options

The PrintMagic™ printing system is designed to provide the best print output default settings for your printer.

Image Aspect



On this page, the card orientation may be set. There are four options:-

▪ Standard	Prints images on a card with a border, (MAGICARD 300 and MAGICARD 300 Plus)
▪ Rotate 180 Degrees	As Standard, but rotated 180 degrees
▪ Full Card	Full-bleed printing up to the card edges. (MAGICARD 300 Plus and Turbo models).
▪ Full Card 180	As Full Card but

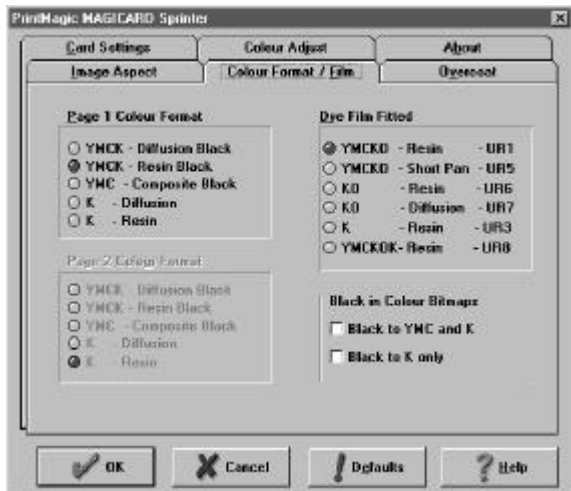
Degrees	rotated 180 degrees.
----------------	----------------------

Oposing Rotation Between Sides is only significant if interfacing to a Magicard Flip Double-Sided printing model.

Display Popup, when selected will enable the Magicard printer spooler that normally is displayed on the bottom right hand side of the PC VDU when printing.

The number of copies may be set from 1 to 255.

Colour Format / Film



Dye Film Fitted - tells the printer which type of dye film you have installed. The dye film supplied with your printer is five panel UR1 dye film. Leave the default selection at YMCKO - Resin. Note that UR8 dye film is only valid for the Magicard Flip Model.

Page 1 Color Format - tells the WINDOWS Driver which dye film panels to use on your card. For printing on the resin black dye panel leave the default selection at YMCK - Resin Black. For a simple color image select YMC-Composite Black.

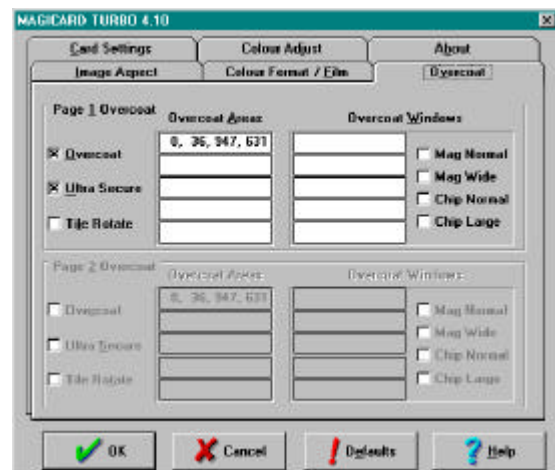
Page 2 Color Format - applies only to Magicard Flip models.

Black to YMC and K - this option when selected will enable the printing of the resin black panel over the top of the YMC panels, this will enable masked barcodes to be printed. Care should be taken to ensure that the background colour is in

the range of 0 to 254 otherwise if the value of 255 is used (full black) the YMC panels will be skipped and only K will be printed.

Black to K Only - this option when selected will enable the printing of objects such as lines, rectangles and graphics providing they are in a full black value of 255, should a value of 254 or lower be used the YMC panels would be used to create the black. This option should NOT be used if a coloured background is being used on the card, as white lines may be present around the edge of the graphics or objects. To print objects using the resin K panel Black to YMC and K should be selected, this will enable a coloured background to be used with the resin black printed on top.

Overcoat



Page 1 - Overcoat check box can be used to turn overcoating on and off.

Page 1 - Ultra Secure check box can be used to turn this security feature on and off. An Ultra Secure key must of course be fitted if a CUSTOM feature is required.

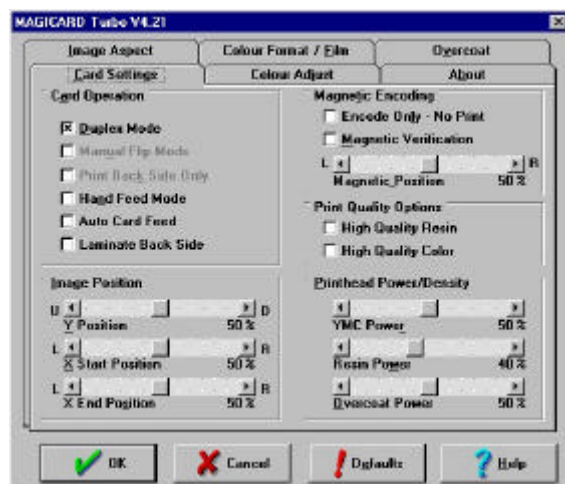
Page 1 - Overcoat Areas/Windows can select the options for specific areas of the card to be overcoated, or for windows to be left in the overcoat (up to five in each case). Overcoating is a 2.5 micron layer of transparent acrylic protection that is available with some types of dye film (For example the "O" in "YMCKO" dye film).

The default settings are for complete coverage to the card margins. For MAGICARD 300 it is 0,36,947,631 and for MAGICARD 300 plus and Turbo it is 0,0,985,641. The four numbers are the X and Y coordinates of the bottom left and top right corners of each area.

Page 1 - Overcoat Areas/Windows check box can be used to provide a pre-selected wide or narrow overcoat window for magnetic stripe and smart cards with a chip.

Page 2 Overcoat - settings apply only to Magicard Flip models.

Card Settings



PRINT QUALITY OPTIONS:

High Quality Resin – This option when selected will improve the quality of the printing of barcodes by reducing vertical distortion. This setting can be used in conjunction with the “Resin Power” setting to optimise the printing of barcodes and images using the K panel of the dye film.

High Quality Colour – This option when selected may improve the image resolution when printing high quality graphical image files. This setting can be used in conjunction with the “YMC Power/Density” settings to optimise the printing of the YMC color panels.

Duplex Mode - When checked, will convert the driver to allow automated double-sided printing. this function only

applies to Magicard Flip models so leave this checkbox switched off.

Manual Flip Mode - Allows operators, running non-Flip models, to manually turn the printed card over and reinsert for printing on the back.

Print on Back Only - For Magicard Flip models only, leave unchecked.

Hand Fed Mode - If this switch is checked then the printer will not feed a card from the hopper but will allow the operator to insert a card from the front. If the card is not inserted when prompted within 20 seconds then the printer will return to standby.

Auto Card Feed - When checked will automatically feed a new card from the card hopper to the start of print position on completion of a printed card.

Laminate Back Side - This is for Flip models only. This box when checked will instruct the Flip Printer to eject the card with the original underside facing up.

Encode Only - No Print - For magnetic encoding models only . Checking this box will prevent any printing on the card, but will encode on the magnetic stripe only.

Magnetic Verification - For magnetic encoding models only. With this box checked the magnetic code will be validated before printing. For interfacing to earlier models, leave unchecked to prevent file errors.

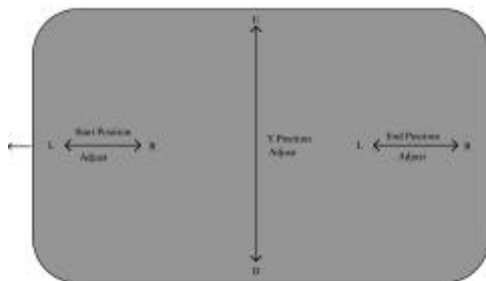
Magnetic Position - For magnetic encoding models only. This adjustment allows the operator to reposition the magnetic stripe to accommodate various swipe readers. A 1% shift is approximately 0.1mm. Scrolling to the L (left) will move the position of the start of the magnetic data (Start Sentinel) closer to the edge of the card. For interfacing to earlier models, leave set at the default value of 50, to prevent file errors.

Y Position - This adjustment allows the operator to centralise the image which may be offset due to the printhead

position. A 1% shift is approximately 0.1mm

X Start Position - This function allows the operator to adjust the position of the start of the image. A 1% shift is approximately 0.1mm. For interfacing to earlier models, leave set at the default value of 50, to prevent file errors.

X End Position - This function allows the operator to adjust the position of the end of the image. A 1% shift is approximately 0.1mm. This adjustment only applies to Full Bleed models. For interfacing to earlier models, leave set at the default value of 50, to prevent file errors.



YMC Power - allows the user to adjust the density of the Yellow, Magenta and Cyan print. For interfacing to earlier models, leave set at the default value of 50, to prevent file errors.

Resin Power - allows the user to adjust the density of the Black Resin print.

Overcoat Power - allows the user to adjust the density of the Overcoat print. For interfacing to earlier models, leave set at the default value of 50, to prevent file errors.

Colour Adjust

The default values for the Contrast, Brightness and color balance of the printed card may be changed in this setup tab. Unless you know what you are doing, avoid changing the defaults.

About

Data on this page is for information only.

When the printer set up selections have been made, click on the **OK** button to

close the setup window and to accept any changes that have been made.

Note: *Although you may be able to access the Printer Setup dialog window from within a WINDOWS application, with some applications, the selected settings will prove to be volatile, and will be lost when you quit WINDOWS.*

Click on the **RESTORE** button to return to the original default values.

Click on the **CANCEL** button to close the setup window and to abandon any changes that have been made.

For further information on installing and configuring printers to your PC, operating in a WINDOWS environment, consult the Microsoft WINDOWS User's Guide.

Printing Monochrome Bitmaps

Driver versions 4.01 and later has an option to print graphics using the resin black panel of the dye film. To print a bitmap on the resin black panel the format must be as a 1 Bit Bitmap image file.

Mag Encoding using the WINDOWS Driver

If you wish to use the magnetic encoder from within a WINDOWS application, create a text string with a tilde (~) symbol at the beginning and place the string anywhere on the image, using a black true type font.

For example, to encode the word "HELLO" on to Track 1 at 210 bpi on a HiCo card, the instructions and data string placed on the image should be:-

```
~1 , BPI210 , MPC7 , COEH , %HELLO?
```

The Magicard 300M printer allows you to encode HiCo and LoCo cards, at 75 or 210 bpi, on any of the three tracks, at 5 or 7 bits per character, with complete freedom.

To ensure the encoded card is recognised by the swipe reader the encoded data must comply with the ISO Standards. For copies of specifications contact:

American National Standards Institute
11W. 42ND Street

New York, New York 10036
Tel: (212) 642-4900

switch to the ECP version later when you are ready, or when you install new system hardware.

Parallel Port Configuration

Non-ECP Operation

If you are using Windows 3.x or if you are using Windows 95 but are unfamiliar with the process of reconfiguring your parallel port for ECP operation, we suggest you use the driver in its "NON-ECP" mode. This is the default mode, and you do not have to do anything other than install the driver to use it. The NON-ECP mode is compatible with Windows 3.x and Windows 95 and uses the parallel printer port in its conventional "Centronics" configuration. In this mode download will take around 17 seconds.

ECP Operation

The ECP mode of the driver can be used only with Windows 95 and uses the parallel port in its "Enhanced Capability" mode to provide a faster download time of around 7 seconds.

Unfortunately, although most PC's are stated to be "ECP compatible" there are still many so called compatible PC's which cannot be properly configured to operate efficiently in ECP mode, either because the interface hardware on the motherboard is incompatible, or because the BIOS firmware does not fully support ECP mode.

There have even been some reports of Windows 95 itself containing bugs which interfere with ECP operation under certain conditions.

To use this mode you need to select ECP mode for the LPT1 port using the control panel, and you may also need to set up your BIOS to operate efficiently in ECP mode.

Which Mode Should I Use

Windows 3.x: Use the NON-ECP mode.

Windows 95: If you are unhappy about reconfiguring your computer's BIOS, or are uncertain whether your computer is fully ECP compliant, we suggest you use the NON-ECP mode. You can always



Install the WINDOWS NT4 Driver

Install the Windows Driver

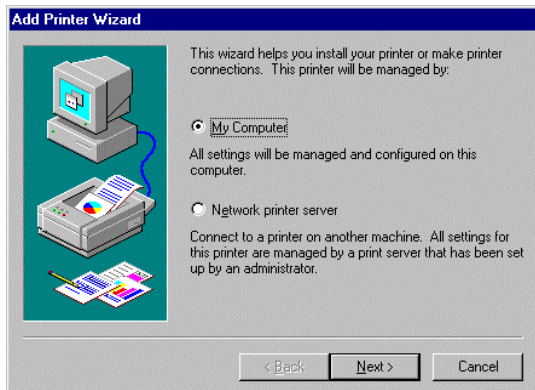
Procedure to be followed if your PC uses Windows NT 4.0:

Start the PC and log in as Administrator to be sure you have the rights to install the driver.

Select the **My Computer** folder and open the **Printers** folder. Double click the **Add Printer** icon.



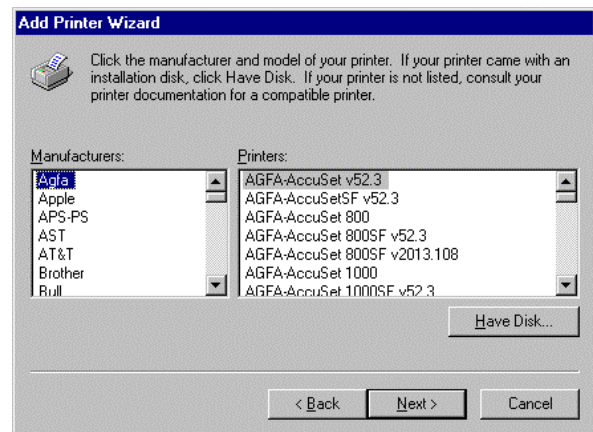
Select the **My Computer** radio button to install the driver on your PC. The **Network printer server** option is used to connect to a printer on another PC. Click **Next** to continue.



Select one or more of the available ports to print to. With the **Add Port..** option a printer port can be added.



Select the **Have Disk** button:

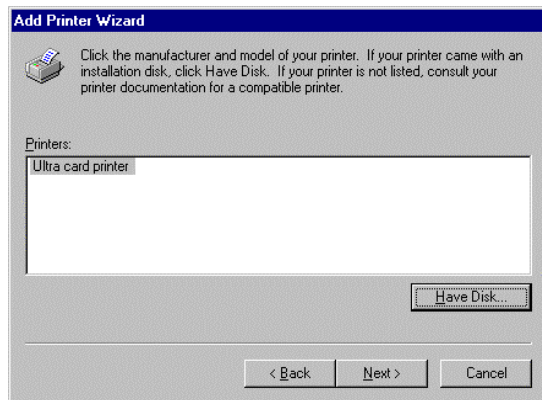


Insert the Ultra card Windows NT driver disk into the PC drive A:.

Select the **OK** button:

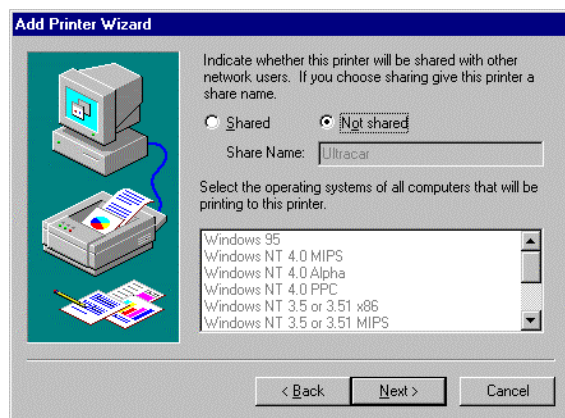


Select the **Next** button:



Fill in the printer name (max. 32 characters, default Ultra card printer) and select the **Next** button.

Now indicate whether you would like to share the printer with other network users. If you will share the printer, fill in a Share Name for the printer and select one or more operating systems that will be used by the other PCs. Select **Next** to continue.



In the following dialogue select if you want to print a test page from Windows? Select the **Finish** button. Now the printer driver files will be copied. A test page (card) will be printed, if selected.

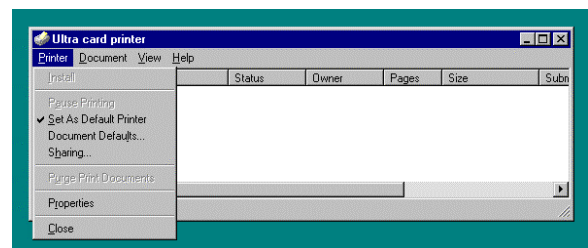
Printer Setup

Printer Setup procedure to be followed if the default setting differs from your requirement:

Select the Ultra card printer from the **Printers** folder:



Select **Document defaults...** from the **File** menu.

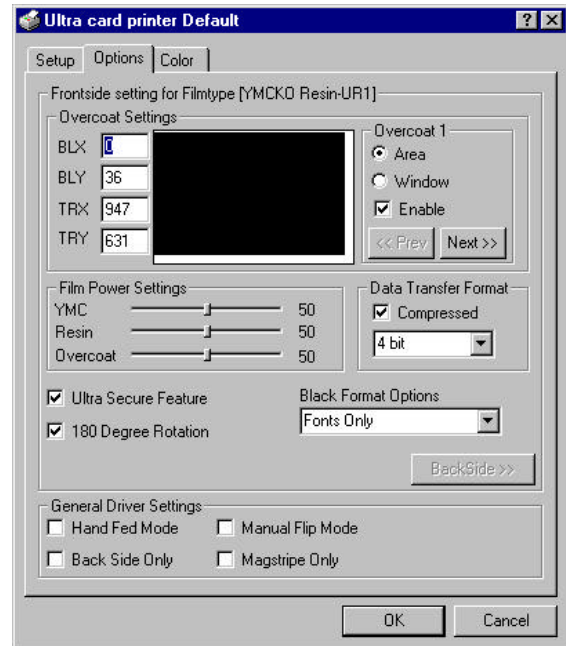
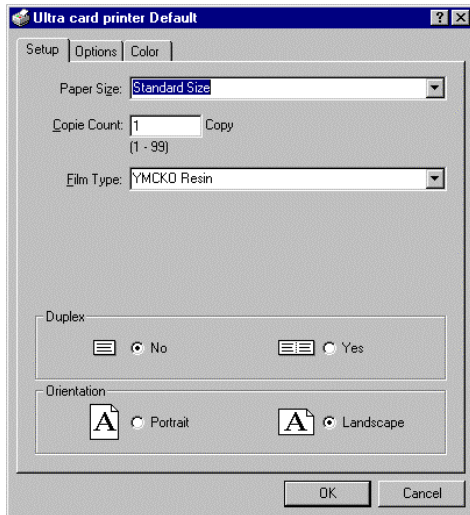


The dialogue that will be displayed consists of three 'tabs':

- Setup
- Options
- Color

Setup

If the **Setup** tab is selected the following settings can be made:



Paper Size	Use Paper Size to determine the printed area of the card. Standard Size or Full Bleed (Magicard 300 plus only) can be selected.
Copy Count	Sets the number of copies printed of each card.
Film Type	Tells the printer which kind of dye film you have installed. The following film types are available: YMCKO-Resin YMCKO-Diffusion YMCKO-Short Panel KO-Resin KO-Diffusion K-Resin K-Diffusion YMCKOK-Resin
Duplex	Tells the printer if one or two sides of the card must be printed.
Orientation	Determines if the card will be printed in portrait or landscape.

Options

If the 'Options' Tab is selected, you will find the following options:

Data Transfer Format

This option will speed up the downloading process from the PC to the printer. To enable this option click on the "Compressed Box" so a tick appears in the window of the box.

Click on the downward pointing arrow directly below the compressed box and select one of the following settings: **4, 5, 6, or 7 bit options**. The lower the number of bits the faster the download speed.

Please note:

The maximum 4-bit Data Transfer Format when selected may produce picture quality degradation when printing high-resolution graphics files. To reduce this effect select the 5-bit data transfer format.

Overcoat Settings

In this section of the 'Options' page, the overcoat can be enabled and the overcoat area can be defined.

BLX	BLX is the bottom left X-coordinate
BLY	BLY is the bottom left Y-coordinate
TRX	TRX is the top right X-coordinate
TRY	TRY is the top right Y-coordinate

Area	If area is selected the coordinates define the start and end of the overcoat area
Window	If window is selected the coordinates define the start and end of the area that has to remain blank (no overcoat)

It is possible to define up to 10 overcoat areas or windows, they will be combined to one area or window on the card.

Prev Switch to previous overcoat area (or window)

Next Switch to next overcoat area (or window)

Enable Enable checkbox can be used to turn overcoat feature on and off. Note that the enable checkbox is valid for all overcoats (1 - 10)

Film Power Setting

The film power settings allow the user to adjust the density for the YMC, the Resin and the Overcoat print. If using earlier models, please leave the settings at default value of 50, to prevent file errors.

Black Format Options

The black format options enable the operator to use resin panel for fonts only, for every black spot on the card or not at all.

Ultra Secure Feature

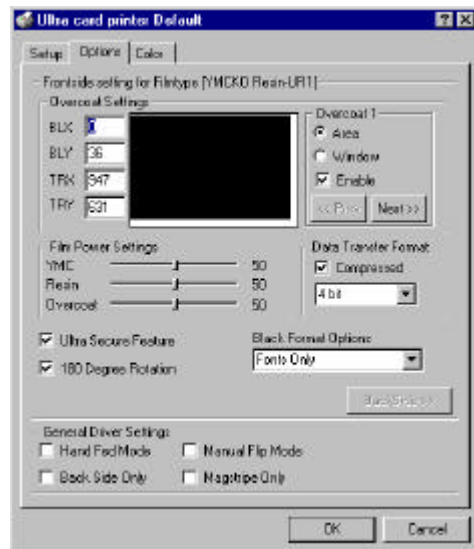
With this checkbox the user can switch the Ultra Secure feature on and off, provided the Ultra Secure Key is installed on the printer.

180 Degree Rotation

This option is used to rotate the complete card layout 180 degrees to adjust for the chip position (on left or right side of the card) or the magstripe position (on the top or bottom of the card).

Back Side

If Duplex mode is enabled (in Setup), this button can be used to switch the 'Options' dialogue to back side, to set the options for the back of the card. The dialogue for the back will look as follows:



The same options can be set as for the front. With the 'Front Side' button, the user can switch back to the front. Note that in Duplex Mode the options 'Back Side Only', 'Manual Flip Mode' and 'Magstripe Only' are not applicable and therefore not available.

Hand Fed Mode - If this switch is checked the printer will not feed a card from the hopper but will allow the operator to insert a card from the front. If the card is not inserted within 20 seconds when prompted then the printer will return to standby.

Back Side Only - This option will only work on Magicard Flip models as they have the ability to print double sided cards. The image will allow a magnetic stripe card to be encoded and printed on the back only.

Manual Flip Mode - Allows operators, running non-flip models, to manually turn the printed card over and reinsert for printing on the back.

Magstripe Only - For magnetic encoding models only. Checking this box will prevent any printing on the card, but will encode on the magstripe only.

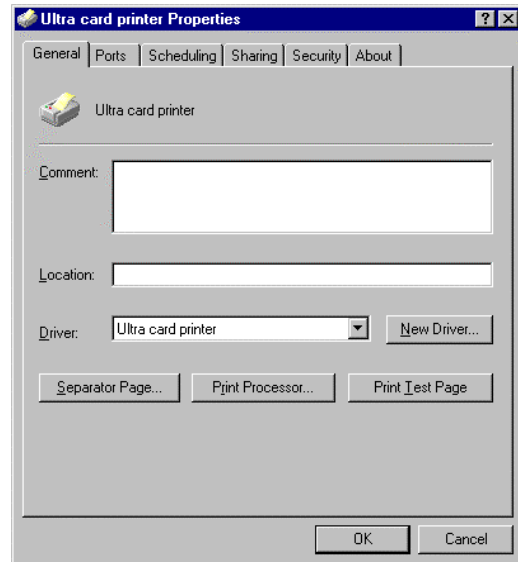
Color



On this page color corrections can be made (a corrected image will be send to the printer). The available settings depend on the ribbon used. For the color ribbon (YMCKO Resin - UR1 in the example), blue, green and red intensity and contrast can be corrected. The effect of the correction is visualized by the bitmap on the left. In this way the user will know what the impact of the correction will be on the printed card. If the 'Use HSL' switch is checked, corrections can be made on the hue, saturation and luminance. If corrections are not satisfying, use the 'Default' button to reset the settings to their default values. From the default position it will be easier to make new corrections.

The same corrections can be made for the back of the card. Use the 'BackSide' button to switch over to the back (this option is only available when Duplex is enabled).

Properties



In 'Properties' no device settings can be made. All settings for the Magicard are available under 'Document Defaults'.

With the 'Print Test Page' button a test page generated by Windows NT can be printed. Since the test page is normally not used for card printers only a part of the page will be printed on the card.

Refer to your Windows NT manual for a description of the 'Properties'.

Verifying Computer to Printer Communication in WINDOWS

The simplest way to verify correct operation is to print a test image from a WINDOWS application:

- Ensure that the Printer is switched **ON** and that the **POWER ON** and **ON LINE** indicators are lit.
- Run a WINDOWS application (badge-making, desk-top publishing or image processing) on your PC, with a suitable image or artwork.
- Ensure that the PrintMagic MAGICARD Printer is the default printer.
- Ensure that the printer cable is connected from the PC to the printer.
- Print the document, by selecting Print from the File menu.
- If the test image - or part of it - prints, the installation is complete and verified.





In Case of Difficulty

Check the Installation:

- Repeat the Installation Steps in this Guide.
- Check that all cables are correctly connected.
- Check the Printer Setup in the WINDOWS Driver.
- Check the dye film and cards are correctly loaded.
- See what happens in the PrintMagic print manager (the icon appears on the Desktop during printing and the print status can be checked).
- Does the PrintMagic DeSpooler window appear on the application, and clear after downloading the image to the printer, or does a red cross appear?
- Does the ON LINE indicator flash during image downloading to the printer?
- If the printer error indicators come on, which ones, and what is the flashing code? (refer to the section on LED error codes).
- Does the printer need cleaning? (Refer to the Section on this page)

For Further Assistance:

- There are a number of useful Technical Bulletins on the MAGICARD WEB page at <http://www.ultra.co.uk/ultra/techbltn.html> - you will need a User Name and Password. If you do not have WEB access, copies can be requested from Customer Service. This is the current list:

Bulletin No.	Description
101	Networking Magicard Printers
102	Windows Drivers - Important Installation Information
103	Configuring your PC to use ECP Protocol
104	Setting-up Procedure for the MAGICARD 300plus Thermal Printhead
105	MAGICARD PCinside - Interconnection
106	MAGICARD PCinside - Installation of a CD-ROM Drive
107	MAGICARD PCinside - Selection of a Video Monitor
108	MAGICARD PCinside - Video Cameras and Frame Grabbers
109	ID Badging Software Packages for WINDOWS
110	MAGICARD Cleaning Procedures
111	International Safety Standards and the Magicard 300 Range
Note:	This List is updated frequently.

- Call your local Dealer, giving the **Model Number** and **Serial Number**, a description of the nature of the problem, and the flashing error codes if present.
- Call the **Ultra Magicard Customer Service Hotline number - +44 (0)1305 762115**

Important Cleaning Procedures

P

It is very important that the MagiCard Printer be cleaned at regular intervals in accordance with these instructions. Cleaning Cards and a Cleaning Pen are included with every printer shipped.



Thermal Printhead Cleaning

It is recommended that the Thermal Printhead be cleaned after every roll of dye film, i.e. after every 250 cards printed.

CAUTION *Failure to clean the Thermal Printhead after every roll of dye film can result in the build up of residues which cause white lines and streaks in the printed image. The Thermal Printhead is a fragile and expensive item. Care should be taken to avoid damage to the printing surface at its lower edge. The surface of the Thermal Printhead should not be touched with the fingers and under no circumstances should any hard, sharp or abrasive materials be allowed to contact it.*

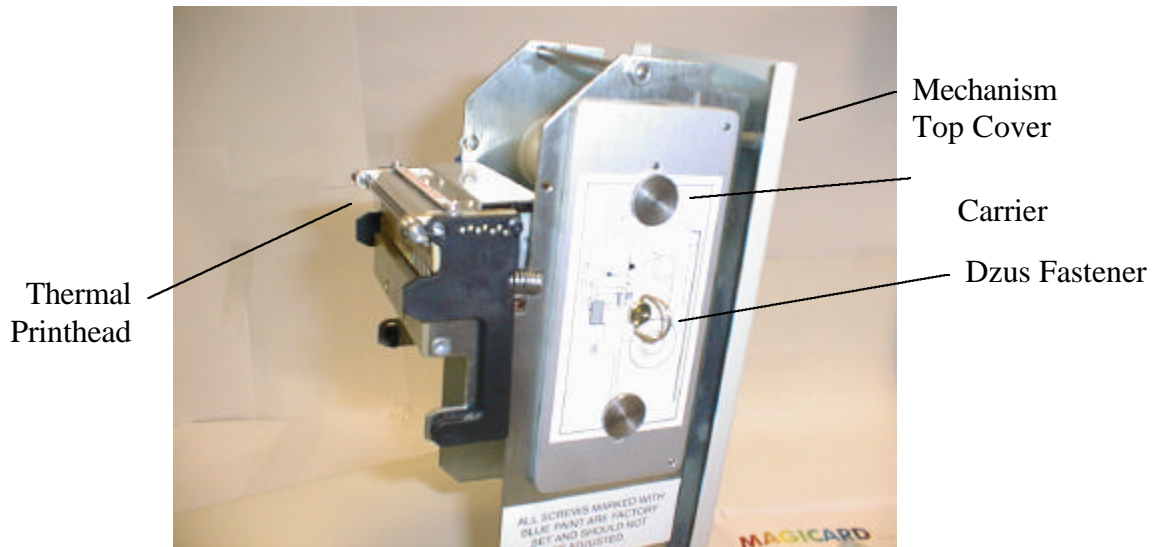
WARNING *The recommended cleaning materials are inflammable. Clean the Thermal Printhead in a well-ventilated area and avoid naked flames. Extinguish any cigarettes.*

Clean the Thermal Printhead as follows:

1. Switch the printer OFF and isolate from the mains power supply.

WARNING *The MagiCard Printer contains potentially lethal voltages.*

2. Release the top cover catch on the right-hand side of the printer cover.
3. Lift up the Top Cover to the vertical position, as illustrated.



4. Whilst changing the dye film, and with the dye film removed, gently wipe the tip of the Thermal Printhead, using a gentle side-to-side action, with the Felt Tip Cleaning Pen supplied.
5. Using a tissue, remove any deposits from the pen tip and replace the pen cap to avoid solvent evaporation. Allow the solvent to evaporate fully from the printhead before proceeding to fit the new roll of dye film.

Cleaning the Tacky Roller

NOTE - It is very important that these Cleaning Instructions are adhered to in order to maintain the MagiCard print quality.

A Tacky Roller is located between the Cassette and the upper brushstrip. Its purpose is to pick up loose debris, fibres and particles from the upper surface of each card which would otherwise cause a blemish on the finished printed card. Depending on the type of cards used it is recommended that the Tacky Roller is cleaned each time the Card Cassette is filled, to recover its stickiness. Clean the Tacky Roller using a piece of Scotch adhesive tape. Refer to **Section E** to see how to remove the Tacky Roller.

Cleaning the Rubber Rollers

It is recommended that the Rubber Rollers in the transport mechanism be cleaned after every 1000 cards printed, using the recommended solvent-impregnated **Cleaning Card** as follows:

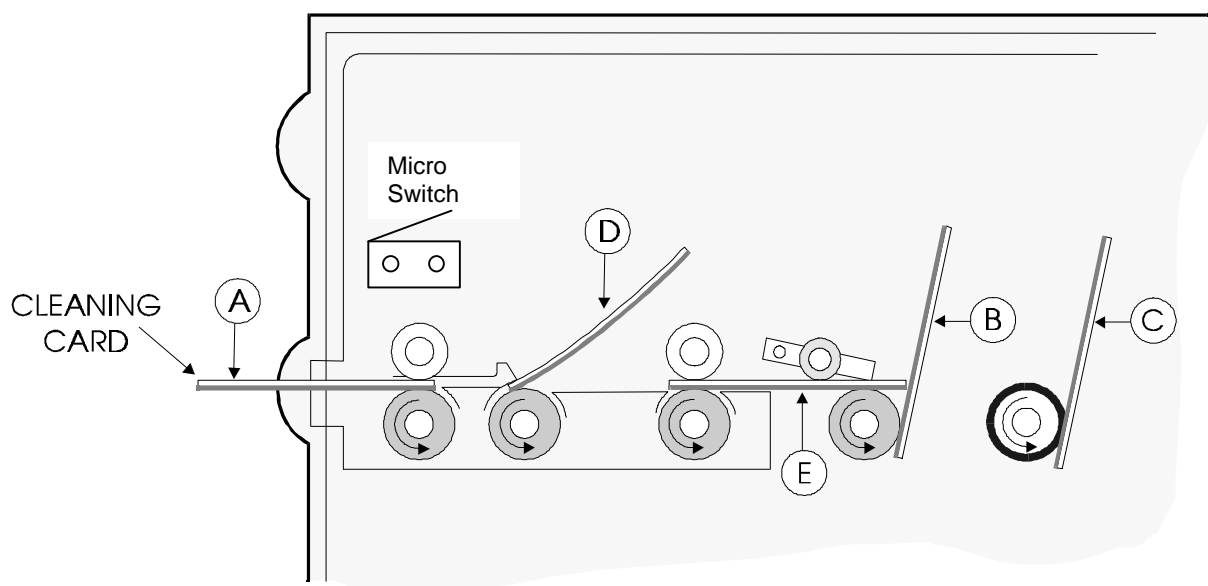
CAUTION: Failure to clean the Rubber Rollers may result in mis-registration of images and problems in feeding cards out of the Cassette.

WARNING *The recommended cleaning materials are inflammable. Clean the Thermal Printhead in a well-ventilated area and avoid naked flames. Extinguish any cigarettes.*

1. Lift up the Top Cover to the vertical position, and remove the Cassette. Switch ON the power supply.
2. Get the motor to turn the rollers by operating the Microswitch in the front of the print engine, by hand. Allow the motors to achieve full operating speed before applying the Cleaning Card to the rollers, otherwise the motors will stall and the rollers fail to turn.
3. Clean the Front Rubber Drive Roller every 1000 cards printed or if mis-registration occurs. Open a fresh solvent impregnated Cleaning Card and clean the Front Rubber Drive Roller by inserting the Cleaning Card from the front with the impregnated side faced down, with the rollers turning so that the roller turns against the Cleaning Card as shown in Position A.
4. Clean the Printhead Roller, normally positioned beneath the Thermal Printhead, by applying the Cleaning Card (with the impregnated side faced down) to the visible surfaces of the Printhead Roller so that the roller turns against the Cleaning Card as shown in Position D.

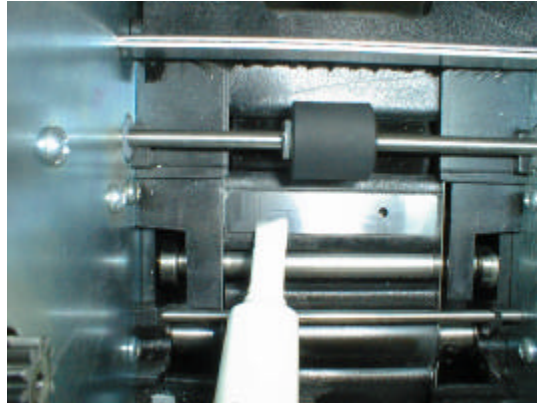
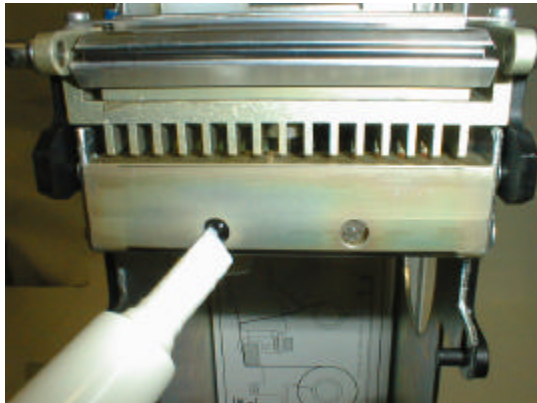
NOTE *Discard the Cleaning Card when it has dried out. One or two cards should be sufficient to carry out these instructions.*

5. Clean the Rear Rubber Drive Roller by inserting the Cleaning Card with the impregnated side faced down, from the rear with the rollers turning (ie, beneath the Card Preventer and the Sticky Roller) so that the lower roller turns against the Cleaning Card as shown in Position E.
6. Clean the Card Feed Rollers every 1000 cards printed or if problems occur with cards feeding from the Cassette. Using the Cleaning Card clean the two Card Feed Rollers. One is normally beneath the Card Cassette and the other is close to the Sticky Roller. These rollers are geared together and cannot be turned by operating the Microswitch as above. Turn one Card Feed Roller by hand whilst applying the Cleaning Card, with the impregnated side faced down, to the other Card Feed Roller. Repeat the cleaning process for the other Card Feed Roller as shown in Positions B and C.



Cleaning the Optics

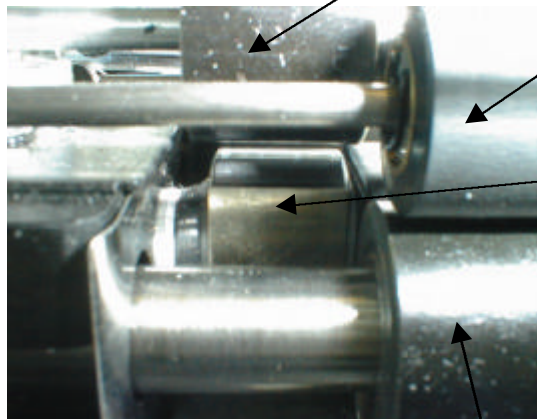
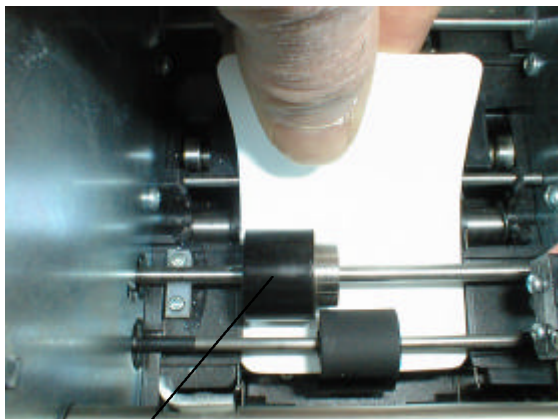
1. Ensure the two light emitting diodes (LED's) adjacent to the Thermal Printhead, are clean and not obscured, the felt tip cleaning pen can be used as in diagram 1.
2. Check that the two apertures to the two optical sensors (one is 3mm diameter, the other is a fine slit in a stainless steel strip) are not obscured by debris, the felt tip pen can be used as in diagram 2.



Cleaning the Magnetic Head (if fitted)

1. The Magnetic Encoding Head is located beneath the second top pinch Roller. To clean the Magnetic Head, insert the Cleaning Card into the mechanism from the rear of the roller and withdraw several times until the head is clean, as shown in diagram 3.
2. The Magnetic Encoding Head can be seen pictured in diagram 4, with the front cover of the printer removed and the top pinch roller lifted.

CAUTION : Take great care not to scratch the surface of the magnetic head with any sharp or abrasive material.



Magnetic Head
Encoding Pinch
Roller

Magnetic Head
Encoding Pinch
Roller

Top Front
Idle Roller

Magnetic
Encoding Head

Bottom Front
Driven Roller

LED Error Codes



The **MAGICARD** printer has extensive error trapping facilities, to provide the operator or service agent with fault diagnosis information.

READY and ERROR Indicator Flashing

The READY indicator flashing indicates that the printer is receiving and processing a file of image data.

If the ERROR indicator is also illuminated continuously, it indicates that the file of image data is incomplete and that the printer is waiting for the rest. If this need cannot be met (perhaps the PC develops a fault or is reset), then the printer must be rebooted by switching off then on again. Ensure that any files in the Windows Spooler are aborted first.

If the ERROR indicator is also flashing this condition indicates an error in the file downloaded from the PC and the printer must be powered down. To ensure that the error will not repeat after reset, abort the transfer on the PC before resetting the printer by opening and closing the lid.

MEDIA Indicator On

This indicates any of the following:

1. Dye film has run out.
2. The wrong dye film has been fitted with respect to the driver settings.
3. The dye film is jammed.
4. The card hopper is empty.
5. A card is jammed in the mechanism.

MEDIA OUT Indicator Flashing

This indicates that the printer is in hand fed mode and is waiting for the operator to manually insert a card through the front aperture.

READY Indicator Flashing

This indicates that the printhead is too hot. The printer waits for it to cool down before Continuing with the print. If it does not cool down within about 60 seconds, the printer will indicate an ERROR as described below.

ERROR Indicator Flashing

This indicates a system hardware fault. The indicator will flash a number of pulses, pause, and then repeat. The number of flashes indicates the cause of the error. Note the number of flash pulses and contact your service agent.

ERROR and READY Indicators Flashing

This indicates a system hardware fault. The indicators will flash a number of pulses, pause, and then repeat. The number of flashes indicates the cause of the error. Note the number of flash pulses and contact your service agent.

Notice

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Federal Communications Commission (FCC) Statement

Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operating in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Note: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

WINDOWS is a trademark of Microsoft Corporation.

MAGICARD 300 is a trademark of Ultra Electronics Limited.

PrintMagic is a trademark of Software 2000 Limited.

IBM, AT and PC are trademarks of International Business Machines Inc.

Limited Warranty Information

1) Coverage: Ultra Electronics Ltd warrants that the MAGICARD printer shipped with this Warranty statement will conform to the manufacturers specifications and be free from defects in materials or workmanship for a period of **12 months** from the date of original purchase by the user, but there are additional conditions on the printhead Warranty (see para 2).

2) Limited Printhead Warranty: Ultra warrants that, under normal use and service, thermal printheads will be free from defects in material and workmanship for a period of twelve (12) months from the date of original purchase or for a quantity of 40,000 printed cards, whichever comes first, provided that Ultra-approved card media is utilised. If a Warranty claim is submitted for a defective printhead, Ultra will have the right to inspect the printhead and samples of the printed and blank ID cards used with it for the purpose of verifying that the claimed defect has not been caused by non-Ultra approved media, or by foreign particles or substances which have caused chemical or physical damage. Ultra's decision in any such claims shall be final.

3) Warranty Claims: If the MAGICARD printer proves defective during this period, please contact the Ultra Service Center, at the address and telephone/fax number given below. The Ultra Service Center personnel may first ask you to carry out certain simple checks to confirm the nature of the problem, and if a return is appropriate they will give you a Return Authorisation Number and consignment instructions to the appropriate repair center. Ultra will, at its option, repair or replace the defective parts at no charge to the customer.

4) Warranty Limitations: The Warranty does not apply to MAGICARD printers that have been:

- Damaged through physical or electrical mishandling.
- Damaged through operation in environments which are outside normal office conditions in terms of corrosive atmosphere, temperature, humidity, shock or vibration.
- Improperly installed or interfaced to other products which may exhibit software problems or expose the MAGICARD to improper voltages or control signals.
- Fitted with dye film rolls from any source other than Ultra Electronics, or have been used to print on anything other than card surfaces which are approved by Ultra and which will generally be made of PVC, be completely flat, and be free of harmful particles or substances.
- Serviced or interfered with by anyone other than an Ultra Authorised Service provider.

5) Shipping: Insurance and shipping costs incurred in sending the MAGICARD printer for Warranty service are the responsibility of the customer. Whenever possible Ultra Service Centers will use the same class of shipping service selected and paid for by the customer to return the printer. Return shipping costs from Ultra to the customer will be at Ultra's expense. After obtaining the Return Authorisation Number as described above, the printer should be securely packed in its original packaging with proof of date of purchase and a note describing the problem and quoting the Return Authorisation Number. The printer must be sent to the service center address supplied with the Return Authorisation Number by the main service center. This address may be different to the address listed below, but will generally be closer to you. Please also mark the Return Authorisation Number on the outside of the shipping carton. All customs duties and taxes, if applicable, are the responsibility of the customer.

6) Applicability: The Warranty and remedy provided above are exclusive and in lieu of all other warrants, either express or implied, including but not limited to, implied warranties of merchantability and fitness for a particular purpose. Any statements or representations made by any other person or firm are void.

Neither Ultra Electronics Ltd nor its affiliates shall be liable for any loss, inconvenience, or damage, including direct, special, incidental, or consequential damages, resulting from the use or inability to use the Ultra product, whether resulting from breach of Warranty or other legal theory even if Ultra has been advised of the possibility of such damage or loss.

This Warranty is governed by the laws of England. Any dispute arising out of or relating to this Warranty shall be submitted for arbitration of this dispute or disputes pursuant to the rules and regulations of the UK Arbitration Act.

This Warranty gives you specific legal rights, and you may also have other legal rights which vary from country to country so the above limitations and exclusions may not apply to all customers.

For Warranty enquiries please call or fax our Warranty Service Manager:-

<p>Ultra Electronics Limited <i>MAGICARD</i> Service Center Waverley House Hampshire Road Granby Estate Weymouth Dorset, DT4 9XD, U.K. Tel: +44 (0)1305 784738 Fax: +44 (0)1305 777904</p>

EC Declaration of Conformity

Manufacturer's Name: Ultra Electronics Limited.

Manufacturer's Address: Waverley House,
Hampshire Road,
Granby Estate,
Weymouth,
Dorset DT4 9XD
England.

declares that the products

Product Name: MAGICARD TURBO Color Card Printer.
Model Numbers: 3505-1000 (basic model)
3505-1002 (+Mag Encoding option)

conform to the following Product Specifications:

Safety: IEC 950/EN60950
Safety of information technology equipment
including electrical business equipment.

Supplementary Information:
Date:

July 1998



Ultra Electronics
Ocean Systems
Waverley House
Hampshire Road
Granby Estate, Weymouth
Dorset DT4 9XD
England

Telephone 01305 784738
Fax 01305 777904

Date: 01 April 1999

Year 2000 Compliancy Statement

Dear Sirs

The equipment listed below has been tested as appropriate in accordance with Ultra Electronics Ocean Systems specification 0008/04/01 and found to be Year 2000 compliant in all respects.

Magocard 300/Turbo Series Hardware (Drg No 3461-00-00)

Yours faithfully

ULTRA ELECTRONICS OCEAN SYSTEMS

A handwritten signature in black ink, appearing to read "R W Coles", written in a cursive style.

R W COLES
Managing Director